

Please type a plus sign (+) inside this box → ☐Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No. MSC-22953-3

First Inventor or Application Identifier Robert L. Shuler, Jr.

Title Method and Apparatus for Reducing the Vulnerability of Latches to Single Event Upsets

Express Mail Label No. EF775095669US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Specification (Total Pages 29)  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) (Total Sheets 21)
4. Oath or Declaration (Total Pages 2)
- a. ☐ Newly executed (original or copy)
- b. ☒ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
- ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

ADDRESS TO: Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

5. ☐ Microfiche Computer Program (Appendix)
6. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
9. ☐ English Translation Document (if applicable)
10. ☐ Information Disclosure Statement (IDS)/PTO-1 449 ☐ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
13. ☐ \* Small Entity Statement filed in prior application, Status still proper and desired (PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
15. ☒ Other: Letter containing the Certificate of Mailing and Copy of the Specifications, drawings, & Oath for Serial number 09/525,371.

**16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment.**

☐ Continuation ☒ Divisional ☐ Continuation-in-part (CIP)  
Prior application information: Examiner P. Dinh

of prior application No. 09, 525,371

Group / Art Unit: 2816

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuing or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion of the disclosure is omitted from the submitted application parts.

**17. CORRESPONDENCE ADDRESS**

☒ Customer Number or Bar Code Label  
24,957

24957  
(Insert Customer No. or attach bar code label here)

or ☒ Correspondence address below

Name NASA Johnson Space Center  
Attn: Mail Code HA/Hardie R. Barr

Address 2101 NASA Road One

City Houston State TX Zip Code 77058

Country USA Telephone 281-483-1003 Fax 281-244-8452

Name (Print/Type) Hardie R. Barr Registration No. (Attorney/Agent) 31,480

Signature *Hardie R. Barr* Date 4/20/01

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.  
(This Form Electronically Generated (9/98))

NASA CASE NO. MSC-22953-3

Patent Application

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Daniel S. Goldin ) Group Art  
First Named Inventor: Robert L. Shuler, Jr. ) Unit:  
Serial No.: )  
Filed : April 20, 2001 )  
For: Method and Apparatus for Reducing the )  
Vulnerability of Latches to Single Event Upsets )

Letter

Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

The enclosed application is being filed in accordance with Rules 1.10 and 1.53(b) in order to obtain a filing date of April 20, 2001. The application is being sent by Express Mail "Post Office to Addressee" under Certificate EF775095669US.

Respectfully submitted,

*Hardie R. Barr*  
Hardie R. Barr, Reg. No. 31,480  
Attorney for Applicant

Houston, Texas 77058  
Telephone: 281-483-1003 or 281-483-4871  
Datafax: 281-244-8452

I hereby certify that the attached application "Method and Apparatus for Reducing the Vulnerability of Latches to Single Event Upsets," is being deposited with the United States Postal Service on April 20, 2001, as Express Mail "Post Office to Addressee" under Certificate No. EF775095669US in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231.

*James M. Cate*  
James M. Cate

*HARDIE R. BARR*  
HARDIE R. BARR



National  
Aeronautics and  
Space  
Administration

Patent Application

## Request for Filing a Continuation, Divisional or Continuation-in-Part Application Under 37 CFR 1.53(b)

NASA Case No. MSC-22953-3

Class \_\_\_\_\_ Subclass \_\_\_\_\_

Prior Application:

Examiner P. Dinh Art Unit 2816

THE COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, DC 20231

Sir:

This is a request for filing a ☐ continuation, ☐ continuation-in-part, or ☒ divisional application under 37 CFR 1.53(b) of  
of 37 CFR 1.53(d) of prior application:

Serial No.: 09/525,371 Confirmation No.: \_\_\_\_\_ Filed: 3/13/00

Entitled: Method and Apparatus for Reducing the Vulnerability of Latches to Single Event Upsets

by the following named inventor(s):

FULL NAME OF INVENTOR	FAMILY NAME Shuler, Jr.	FIRST GIVEN NAME Robert	SECOND GIVEN NAME L.
RESIDENCE & CITIZENSHIP	CITY Friendswood	STATE OR FOREIGN COUNTRY Texas	COUNTRY OF CITIZENSHIP U.S.A.
MAILING ADDRESS	STREET NUMBER AND NAME 5238 Appleblossom	CITY Friendswood	STATE AND ZIP CODE/COUNTRY Texas 77546 U.S.A.
FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
MAILING ADDRESS	STREET NUMBER AND NAME	CITY	STATE AND ZIP CODE/COUNTRY
FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECOND GIVEN NAME
RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
MAILING ADDRESS	STREET NUMBER AND NAME	CITY	STATE AND ZIP CODE/COUNTRY

- ☒ 1. Enclosed is a copy of the prior application, including the specifications, claims, drawings and declaration as originally filed.
- ☒ 2. Cancel in this application original claim 1-7 and 17-21  
of the prior application before calculating the filing fee. (At least one original independent claim must be retained for filing)
- ☐ 3. A preliminary amendment is enclosed. (Claims added by this amendment have been properly numbered consecutively beginning the number next following the highest numbered original claim in prior application.)

The filing fee is calculated on the basis of claims existing in the prior application as amended at 2, above.

CLAIMS				
FOR (1)	NUMBER		RATE (4)	CALCULATIONS (5)
	PAID FOR (2)	EXTRA (3)		
TOTAL CLAIMS 25	20	5	\$18.00	\$90.00
INDEPENDENT CLAIMS 4	3	1	\$80.00	\$80.00
MULTIPLE DEPENDENT CLAIMS (If applicable) -----				
BASIC FEE -----				\$710.00
			TOTAL	\$880.00

- ☒ 4. The Commissioner is hereby authorized to charge any fees which may be required to effect only the filing of this application under CFR 1.16 or credit any overpayment to Deposit Account No. 14-0116
- ☐ 5. A new declaration is included (required for continuation or divisional application adding new inventor, and in continuation-in-part applications).
- ☒ 6. Amend the specification by inserting before the first line the following sentence:  
 "This application is a ☒ division, ☐ continuation-in-part, or  
☐ continuation of application Serial No. 09/525/371, filed 03/13/2000."
- ☐ 7. New formal drawings are enclosed.
- ☐ 8. Non publication request and certification is enclosed (PTO/SB/35 or equivalent).
- ☒ 9. The prior application is assigned of record to:  
Government of the United States of America as represented by the Administrator, National Aeronautics & Space
- ☒ 10. The Power of Attorney in the prior application is to:  
☒ a. Registered practitioners at Customer No.: 24957  
☐ b. Registered practitioners listed below (Name and registration number):  
 \_\_\_\_\_  
 \_\_\_\_\_
- ☐ 11. A Power of Attorney is enclosed.
- ☒ 12. Also enclosed: Extra copy of this form; letter containing the Express Mailing Certificate & Form PTO/SB/05  
 Address all future communications to:  
☒ a. Customer No.: 24957  
☐ b. Correspondence Address listed below (Name, address and telephone number):  
 \_\_\_\_\_  
 \_\_\_\_\_

April 20, 2001  
 (Date)

Hardy R. Berry  
 (Signature - Attorney of Record) (Registration Number)